

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Garland Stephens, *et al.*

Group Art Unit: 3684

Serial No.: 09/655,929

Confirmation No. 8518

Date Filed: September 6, 2000

Examiner: Nga b. NGUYEN

For: METHOD AND SYSTEM FOR
DETERMINING, CONTRACTING TO
EXCHANGE, AND ACCOUNTING FOR
MATCHED SETS OF OFFSETTING CASH
FLOWS

Commissioner for Patents
P.O. Box 1450
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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted today via the Office electronic filing system (EFS-Web) in accordance with 37 CFR §1.6 (a)(4).

Date: 02/01/2012

Signature: /Erika Vasquez/

Printed Name: Erika Vasquez

PRELIMINARY AMENDMENT

In response to the Final Office Action mailed February 2, 2011 (“the Office Action”) and the Notice of Appeal filed on August 1, 2011, this Preliminary Amendment is being filed concurrently with a Request for Continued Examination (RCE) and an Extension of Time. Prior to examination of the above-referenced patent application, please amend the specification as follows:

Listing of Claims begin on page 2 of this paper. This listing of claims replaces all prior versions and listings of claims in the application.

Remarks begin on page 6 of this paper.

CLAIMS LISTING:

Claim 1-11 (Canceled).

12. (Previously Presented) A method for determining a set of structured cash flows for exchange the method comprising:

in an electronic system comprising one or more processors and one or more memories:

establishing, via processor instruction, in the one or more processors a data structure corresponding to a graph having nodes corresponding to a collection of at least partial exchange definitions including at least one at least partial swap definition,

a portion of the data structure corresponding to at least one edge between the exchange definitions having at least partially compatible terms,

the at least partially compatible terms including at least one of: an underlying, a start date, an end date, and a variance; and

determining, via processor instruction, data corresponding to a linear combination of edges corresponding to a maximum notional amount for the graph with respect to one or more exchange definitions.

Claims 13-27 (Canceled).

28. (Previously Presented) A method for determining a set of structured cash flows for exchanges, the method comprising:

in an electronic system comprising one or more processors and one or more memories:

establishing, via processor instructions stored in the one or more memories and executed on the one or more processors, in the one or more memories a data structure corresponding to a graph having nodes corresponding to a collection of at least partial exchange definitions,

a portion of the data structure corresponding to one or more edges between at least two at least partial cash flow definitions having at least partially compatible terms,

at least one of the edges corresponding to at least a partial match of one or more requirements of a swap transaction,

the at least partially compatible terms including at least one of: an underlying, a start date, an end date, and a variance; and

determining, via processor instructions stored in the one or more memories and executed on the one or more processors, data corresponding to a linear combination of edges corresponding to a maximum notional amount for the graph with respect to one or more swap definitions.

29. (Currently Amended) A ~~software product comprising~~ non-transitory computer readable medium having compute readable program code embodied therein, the non-transitory computer readable medium comprising computer readable program code configured to cause a computer system to:

~~digital information storage media, and~~

~~operable, when executed by at least one processor, to:~~

determine a linear combination of structured cash flow exchanges having a net present value of substantially zero and corresponding to maximum flow for a graph having at least one node corresponding to at least one swap such that the set of structured cash flow exchanges determined thereby is substantially hedged.

30. (Currently Amended) A ~~software product comprising~~ non-transitory computer readable medium having compute readable program code embodied therein, the non-transitory computer readable medium comprising computer readable program code configured to cause a computer system to:

~~digital information storage media, and
processor instructions, residing on the media, and
operable, when executed by at least one processor, to:~~

determine a linear combination of structured cash flow exchanges having a net present value of substantially zero and corresponding to minimum cut for a graph having at least one node corresponding to at least one swap such that the set of structured cash flow exchanges determined thereby is substantially hedged.

REMARKS

Claims 12 and 28-30 are pending in this application and stand rejected. Claims 29 and 30 are currently amended. Claims 1-11 and 13-27 have been previously canceled without prejudice or disclaimer. No new matter is added. The undersigned representative respectfully requests reconsideration and allowance of these claims in view of the following remarks.¹

Rejection of Claims 29 and 30 under 35 U.S.C. §101

Claims 29 and 30 stand rejected under 35 U.S.C. §101 “because the claimed invention is directed to non-statutory subject matter.” *Office Action*, p. 3. Claims 29 and 30 are amended in this Preliminary Amendment and are now directed to non-transitory computer readable mediums. As a result, this rejection is rendered moot. It is respectfully requested that the rejection of claims 29 and 30 under 35 U.S.C. §101 be reconsidered and withdrawn.

Rejection of Claims 12 and 28 under 35 U.S.C. §103(a)

Claims 12 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,086,619 to Hausman *et al.* (hereinafter “Hausman”) in view of U.S. Patent 6,317,727 to May (hereinafter “May”). *Office Action*, p. 3. This rejection is respectfully traversed. Pursuant to the requirements for establishing a *prima facie* case of obviousness under 35 U.S.C. §103, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Neither Hausman nor May, either singularly or in combination, teach or suggest, “determining, via processor instruction, data corresponding to a linear combination of edges corresponding to a maximum notional amount for the graph with respect to one or more exchange definitions,” as recited in independent claim 12. The Office Action asserts Hausman for teaching this limitation at, “(column 7, lines 20-65, Netcore allows arbitrary groups of

¹ As the undersigned representative’s remarks with respect to the Examiner’s rejections are sufficient to overcome these rejections, the undersigned representative’s silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., assertions regarding dependent claims, whether a reference constitutes prior art, whether references are legally combinable for obviousness purposes) is not a concession by the undersigned representative that such assertions are accurate or that such requirements have been met, and the undersigned representative reserves the right to analyze and dispute such in the future.

network elements to be defined and maximum, minimum or fixed values to be defined for the total value over those groups.” *Office Action*, pp. 4-5. This asserted section recites:

Additionally, the following terms are used in their ordinary network theoretic sense: link "cost", "rate" or "tariff" is the unit cost of the link's associated value; link "max" and "min" are upper and lower bounds on the associated link value; link "yield", sometimes referred to as "shrink", "gain" or "multiplier", denotes the fixed ratio of the link output value to the input value (unless the input value and output value are both zero). Every node may have a supply value (source), a market value (sink), both or neither; the "MPrice" and "SPrice" node attributes refer, respectively, to the unit price and unit cost of node market and supply values, if any; and "Mmax" ("SMax") and "MMin" ("SMin") refer to the upper and lower bounds on the node's respective market (supply) values. See Tables 1 & 2. Nodes that have neither associated supply nor market are sometimes called transshipment nodes.

As used in the description of the invention and in the appended claims, the term network elements includes nodes and links; and the term network element value includes the numerical value associated with particular supplies, markets and links. Note that each supply and market must be associated with a specific node.

Netcore employs several constructs and enhancements which are novel. First, Netcore allows arbitrary groups of network elements to be defined and maximum, minimum or fixed values to be defined for the total value over those groups. Second, the values associated with a specified network element (or network element group) may be required to be zero unless the value associated with another specified network element (or network element group) is at its maximum. Finally, the value associated with a particular network element (or network element group) may be constrained (maximum, minimum or equality) by a quantity proportional to the value associated with another network element (or network element group). Each of these enhancements may be used to relate element values in subnetworks whether connected or not connected. Formal specification of Netcore elements, attributes and constraint mechanisms is set out in TABLES 1 and 2 below. As a result of these enhancements, the set of problems representable by Netcore can be shown to include the set of problems representable as MILPQ programs. The term "enhanced network" will be used to refer collectively to Netcore models that may include some or all of the Netcore enhancements.

The Netcore group constructs behave as "second order" operators and allow constraints to be placed easily on the values associated with arbitrary subsets of network supplies, markets and links in ways that are not possible with traditional network internal node and link attribute and constraint representations. Traditional network optimization problems have their constraints on the nodes and the links. These are first order constraints, i.e., each constraint concerns a single object in the network.

Hausman, 7:20-8:5. Although Hausman discloses maximum, minimum and fixed values, Hausman does not teach or suggest “a maximum notional amount” as recited in independent claim 12. The Office Action fails to consider the word “notional.” As recited in the MPEP, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). *MPEP* § 2143.03.

As a result, Hausman fails to teach or suggest, “determining, via processor instruction, data corresponding to a linear combination of edges corresponding to a maximum notional amount for the graph with respect to one or more exchange definitions,” as recited in independent claim 12. May is not asserted for teaching or suggesting this limitation. Therefore, the Office Action fails to establish a *prima facie* case of obviousness with respect to independent claim 12.

Independent claim 28 contains similar limitations as argued above with respect to independent claim 12. Thus, the same arguments regarding independent claim 12 apply to independent claim 28. Specifically, the applied art fails to teach or suggest, “determining, via processor instructions stored in the one or more memories and executed on the one or more processors, data corresponding to a linear combination of edges corresponding to a maximum notional amount for the graph with respect to one or more swap definitions,” as recited in claim 28 of the present application. Therefore, the undersigned incorporates the above arguments with respect to the applied prior art herein.

For at least these reasons, independent claims 12 and 28 are allowable over the applied art. Accordingly, the undersigned respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection of claims 12 and 28.

Rejection of Claims 29 and 30 under 35 U.S.C. §103(a)

Claims 29 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hausman in view of U.S. Patent 6,393,409 to Young *et al.* (hereinafter “Young”). *Office Action*, p. 6. This rejection is respectfully traversed. Neither Hausman nor Young, either singularly or in combination, teach or suggest, “determine a linear combination of structured cash flow

exchanges having a net present value of substantially zero and corresponding to maximum flow for a graph having at least one node corresponding to at least one swap such that the set of structured cash flow exchanges determined thereby is substantially hedged,” as recited in independent claim 29. The Office Action asserts Hausman for teaching this limitation at, “(column 7, lines 20-65, Netcore allows arbitrary groups of network elements to be defined and maximum, minimum or fixed values to be defined for the total value over those groups.” *Office Action*, p. 6. The asserted section is recited above.

Although Hausman discloses maximum, minimum and fixed values, this asserted section of Hausman does not teach or suggest “a maximum flow” as recited in independent claim 29. The Office Action fails to consider the words “maximum flow.” As recited in the MPEP, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). *MPEP* § 2143.03. The same argument applies to independent claim 30 and the term “minimum cut.”

Consistent with the principle that all limitations in a claim must be considered to be meaningful, it is improper to rely on the same citations in Hausman for teaching a maximum notional amount, maximum flow and minimum cut. *See, Lantech, Inc. v. Keip Machine Co.*, 32 F.3d 542 (Fed. Cir. 1994)(in infringement context, a single conveyor held to not meet claim element requiring at least two conveyors); *In re Robertson*, 169 F.3d 743 (Fed. Cir. 1999)(claim requiring three separate means not anticipated by structure containing two means where one of the two means was argued to meet two of the three claimed means). As ruled by the Federal Circuit, two limitations cannot be disclosed by the same citation as asserted in the Office Action. The Office Action improperly asserts the same section, e.g., column 7, lines 20-65 of Hausman, for disclosing three limitations: maximum notional amount, maximum flow and minimum cut. Each of these terms has a different definition and the same citation cannot be used for all three limitations.

As a result, Hausman fails to teach or suggest, “determine a linear combination of structured cash flow exchanges having a net present value of substantially zero and

corresponding to maximum flow for a graph having at least one node corresponding to at least one swap such that the set of structured cash flow exchanges determined thereby is substantially hedged,” as recited in independent claim 29. Young is not asserted for teaching or suggesting this limitation. Therefore, the Office Action fails to establish a *prima facie* case of obviousness with respect to independent claim 29.

Independent claim 30 contains similar limitations as argued above with respect to independent claim 29. Thus, the same arguments regarding independent claim 29 apply to independent claim 30. Specifically, the applied art fails to teach or suggest, “determine a linear combination of structured cash flow exchanges having a net present value of substantially zero and corresponding to minimum cut for a graph having at least one node corresponding to at least one swap such that the set of structured cash flow exchanges determined thereby is substantially hedged,” as recited in claim 30 of the present application. Therefore, the undersigned incorporates the above arguments with respect to the applied prior art herein.

For at least these reasons, independent claims 29 and 30 are allowable over the applied art. Accordingly, the undersigned respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection of claims 29 and 30.

Conclusion

In view of the above, the undersigned representative respectfully submits that the present application is in condition for allowance and a Notice to that effect is earnestly solicited. If it is determined that a telephone conversation would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned representative at the number given below.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 14-1437, referencing Attorney Docket No.: 8224.003.NPUS00.

Respectfully submitted,

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